

What is claimed is:

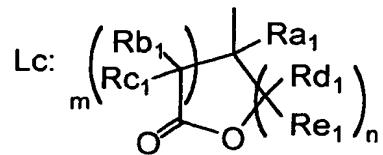
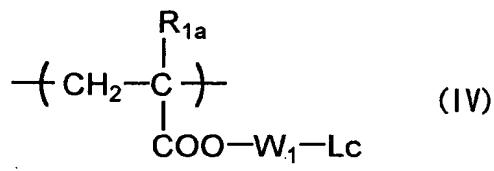
1. A positive resist composition, comprising:

(A) a resin comprising at least one kind of acrylate derivative repeating units, having a glass transition temperature in the range of 70 to 155°C and capable of increasing its solubility in an alkali developer under action of an acid,

wherein the resin has repeating units of at least one kind selected from repeating units represented by the following formula (IV) and repeating units having groups represented by the following formula (V-1), (V-2), (V-3) and (V-4); and repeating units represented by the following formula (AII),

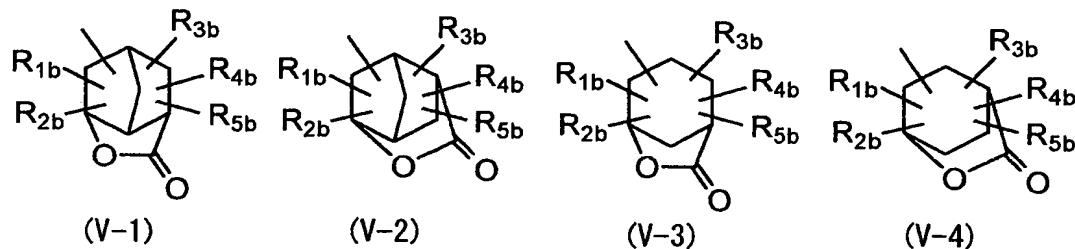
(B) a compound capable of generating an acid upon irradiation with an actinic ray or radiation, and

(C) an organic solvent comprising at least one solvent selected from a propylene glycol monoalkyl ether carboxylate, an alkyl lactate and a linear ketone; and a cyclic ketone:

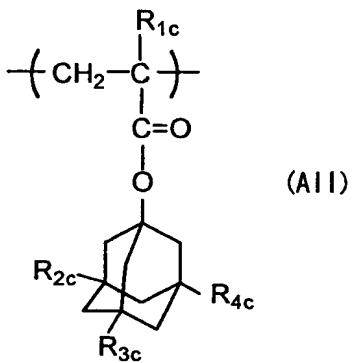


wherein R_{1a} represents a hydrogen atom or a methyl group, W_1 represents a divalent single group selected from the class consisting of a single bond, an alkylene group, an ether group, a thioether group, a carbonyl group and an ester group, or a combination thereof,

R_{a1} , R_{b1} , R_{c1} , R_{d1} and R_{e1} each independently represents a hydrogen atom or an alkyl group having 1 to 4 carbon atoms, and m and n each independently represents an integer of 0 to 3, provided that $m+n$ is from 2 to 6:



wherein R_{1b} to R_{5b} each independently represents a hydrogen atom, an alkyl group, a cycloalkyl group or an alkenyl group, and any two of them may be combined with each other to form a ring:



wherein R_{1c} represents a hydrogen atom or a methyl group, R_{2c} to R_{4c} each independently represents a hydrogen atom or a hydroxyl group, provided that at least one of R_{2c} to R_{4c} represents a hydroxyl group.

2. The composition according to claim 1, wherein 10 to 90 mole % of the repeating units constituting the resin (A) are derived from acrylate monomers.

3. The composition according to claim 1, wherein 50 to 75 mole % of the repeating units constituting the resin (A) are derived from acrylate monomers.

4. The composition according to claim 1, wherein the compound (B) is a triphenylsulfonium salt.

5. The composition according to claim 1, wherein the compound (B) is a phenacylsulfonium salts.

6. The composition according to claim 1, wherein the cyclic ketone is contained in an amount of 20 to 70% by weight based on the total amount of the organic solvent (C).

7. The composition according to claim 1, wherein the cyclic ketone is contained in an amount 30 to 60% by weight based on the total amount of the organic solvent (C).

8. The composition according to claim 1, wherein the resin (A) has alkali-soluble groups protected by 1-adamantyl-1-alkyl groups.

9. The composition according to claim 1, wherein the glass transition temperature is in the range of 70 to 150°C.

10. The composition according to claim 9, wherein the glass transition temperature is in the range of 80 to 140°C.

11. The composition according to claim 1, wherein the glass transition temperature is in the range of 80 to 140°C.

12. The composition according to claim 1, wherein the content of the repeating units represented by formula (IV) is from 20 to 70 mole % based on the total repeating units in the resin.

13. The composition according to claim 12, wherein the content of the repeating units represented by formula (IV) is from 25 to 60 mole % based on the total repeating units in the resin.

14. The composition according to claim 1, wherein the content of the repeating units represented by formulae (V-1) to (V-4) is from 20 to 70 mole % based on the total repeating units in the resin.

15. The composition according to claim 14, wherein the content of the repeating units represented by formulae (V-1) to (V-4) is from 25 to 60 mole % based on the total repeating units in the resin.

16. The composition according to claim 1, further comprising a nitrogen-containing basic compound.

17. The composition according to claim 1, further comprising at least one of fluorine-based and/or silicon-based surfactants.

18. A method for forming a pattern, which comprises forming a resist film comprising the composition described in claim 1, exposing the resist film upon irradiation with the actinic ray or a radiation, and subsequently developing the resist film.